

Title (en)  
TETRAPEPTIDE AND COMPOSITIONS COMPRISING TETRAPEPTIDES

Title (de)  
TETRAPEPTID UND ZUSAMMENSETZUNGEN MIT TETRAPEPTIDEN

Title (fr)  
TÉTRAPEPTIDE ET COMPOSITIONS COMPRENANT DES TÉTRAPEPTIDES

Publication  
**EP 4000597 A1 20220525 (EN)**

Application  
**EP 20020537 A 20201117**

Priority  
EP 20020537 A 20201117

Abstract (en)  
According to the present invention, there is provided One embodiment of the present invention is directed toward a tetrapeptide of generic formulation U-XXGD-Z wherein G is used to denote amino acid Glycine and D is used to denote amino acid Aspartic acid, as per the internationally recognised single letter code for amino acids. X denotes an amino acid selected from the group consisting of Glutamic acid (E), Lysine (K), Leucine (L), Isoleucine (I), Arginine (R) and mixtures thereof. At the N-terminal end, U is selected from the group consisting of H, -CO-R<sup>1</sup></sup>, -SO<sub>2</sub></sub>-R<sup>1</sup></sup> or a biotinyl group. At the C-terminal end, Z is selected from the group consisting of OH, O R<sup>1</sup></sup>, NHR<sup>1</sup></sup> or NR<sup>1</sup></sup>-R<sup>2</sup></sup>. R<sup>1</sup></sup> and R<sup>2</sup></sup> are independently selected from the group consisting of alkyl, aryl, aralkyl, alkylaryl, alkoxy, saccharide and aryloxy group, which may be linear, branched, cyclical, polycyclic, unsaturated, hydroxylates, carbonylated, phosphorylated and/or sulphurous, said groups comprising from 1 to 24 carbon atoms and being capable of including one or more heteroatoms O, S and/or N.

IPC 8 full level  
**A61K 8/64** (2006.01); **A61Q 19/08** (2006.01)

CPC (source: EP KR US)  
**A61K 8/64** (2013.01 - EP KR US); **A61Q 19/08** (2013.01 - EP KR US); **C07K 5/1008** (2013.01 - EP KR); **C07K 5/101** (2013.01 - EP KR); **C07K 5/1019** (2013.01 - US); **C07K 5/1021** (2013.01 - EP KR US); **A61K 2800/5922** (2013.01 - KR)

Citation (applicant)  
WOESSNER J. F., FASEB JOURNAL, vol. 5, 1991, pages 2145

Citation (search report)  
• [X] US 2016054302 A1 20160225 - ZHANG MIQIN [US], et al  
• [X] US 2005058603 A1 20050317 - GAO JINMING [US], et al  
• [X] US 2017158768 A1 20170608 - CHRONEOS ZISSIS [US], et al  
• [X] US 5961923 A 19991005 - NOVA MICHAEL P [US], et al  
• [X] US 2012283410 A1 20121108 - MIROSEVICH JANNI [US], et al  
• [X] US 7618636 B1 20091117 - MASIGNANI VEGA [IT], et al  
• [X] US 2001041681 A1 20011115 - PHILLIPS NIGEL C [CA], et al  
• [X] CN 1765930 A 20060503 - YANG YINGHUA [CN]  
• [X] EP 2564880 A1 20130306 - FUJIFILM CORP [JP]  
• [X] US 2016132631 A1 20160512 - BREMEL ROBERT D [US], et al  
• [X] US 2008139787 A1 20080612 - DE JESUS OMAYRA PADILLA [US], et al  
• [X] US 5849690 A 19981215 - ALI FADIA EL-FEHAIL [US], et al  
• [X] WO 0110450 A1 20010215 - IMARX THERAPEUTICS INC [US]  
• [A] WO 2007146269 A2 20071221 - HELIX BIOMEDIX INC [US], et al  
• [A] EP 2065029 A1 20090603 - EVONIK GOLDSCHMIDT GMBH [DE]  
• [A] WO 2013137569 A1 20130919 - MIWON COMMERCIAL CO LTD [KR]  
• [A] EP 2382963 A1 20111102 - COGNIS IP MAN GMBH [DE]  
• [X] ALCARO MARIA C ET AL: "On-resin head-to-tail cyclization of cyclotetrapeptides: Optimization of crucial parameters", JOURNAL OF PEPTIDE SIENCE., vol. 10, no. 4, 1 April 2004 (2004-04-01), pages 218 - 228, XP002536111, ISSN: 1075-2617, [retrieved on 20031110], DOI: 10.1002/PSC.512  
• [X] MORLEY J S ET AL: "Structural specificity of beta-endorphin C-terminal tetrapeptide (MPF) in promoting urodele limb regeneration", LIFE SCIENCE, PERGAMON PRESS, OXFORD, GB, vol. 45, no. 15, 1 January 1989 (1989-01-01), pages 1341 - 1347, XP025556594, ISSN: 0024-3205, [retrieved on 19890101], DOI: 10.1016/0024-3205(89)90020-9

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 4000597 A1 20220525**; AU 2021383949 A1 20230622; CN 116744893 A 20230912; EP 4247327 A1 20230927; JP 2023549830 A 20231129; KR 20230122594 A 20230822; MX 2023005772 A 20230802; US 2023414476 A1 20231228; WO 2022106056 A1 20220527

DOCDB simple family (application)  
**EP 20020537 A 20201117**; AU 2021383949 A 20211116; CN 202180089045 A 20211116; EP 2021025444 W 20211116; EP 21806651 A 20211116; JP 2023528562 A 20211116; KR 20237020494 A 20211116; MX 2023005772 A 20211116; US 202118037474 A 20211116